

# A NEW AUSTRALIAN SHARK

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## FAMILY TRIAKIDAE.

FUR Whitley 1943.

*Fur* Whitley, Austr. Zool., x, 2, April 30, 1943, p. 167, Orthotype *F. macki* Whitley, from Mordialloc, Victoria.

A new species of this genus has recently been found in Western and South Australia, which may be named and diagnosed as follows.

### FUR VENTRALIS sp. nov.

*Head.* Snout bluntly rounded. Most of interorbital flat, sloping laterally over the dorso-laterally situated eyes which are elongate oval, with long horizontal pupils. Nictitating fold distinct from and slightly longer than orbit. Spiracles small, slit-like. Nostrils large, nearer mouth than tip of snout, each with a broad, long (16 mm.) cirrus overlying a triangular lobe. No nasoral groove. Width of mouth nearly equals preoral length. Upper labial folds longer than lower.

Teeth compressed, subtriangular. Teeth of upper jaw all acute, with the centre fang inclined outwards, inner shoulders smooth, outer margin with four thick and rather blunt cusps. Symphysial pair of teeth in upper jaw entire, consisting of a solitary broad central fang with wide shoulders and no cusps. Teeth in middle of lower jaw also entire with broad triangular central fang, wide shoulders, and no cusps. Lateral teeth of lower jaw becoming less acute until the outermost are minute, flat, vestiges in pavement formation. No symphysial tooth differentiated in lower jaw.

Dental formula  $\frac{14 \cdot 1 \cdot 1 \cdot 14}{c.42}$ . Three functional rows of teeth in middle of upper jaw and five or six in middle of lower jaw.

Tongue rugose, broadly rounded. Ampullae of Lorenzini rather sparse. Endolymphatic openings inconspicuous.

First three gill-slits of equal length (27 mm.), fourth smaller (25 mm.), and the fifth, which opens over the pectoral, is notably the smallest (19 mm.); spaces between slits subequal.

*Body.* Form elongate, subcylindrical. Predorsal profile not markedly gibbous. Greatest depth little forward of origin of first dorsal. Greatest width of shark (150 mm.) just behind pectorals. Head and body subequal to rest of shark. Interdorsal and precaudal ridges present. No predorsal ridge. Shagreen consists of fine, close-set or imbricate, hard denticles, which vary from tricarinate on back to smooth on belly and over caudal where they are not notably enlarged. Lateral line system conspicuous; there is a downward dip, followed by an upward trend in the course of the lateral line between second dorsal and anal fins. Pit organs inconspicuous. Abdominal pores large. No caudal pits.

*Fins.* Dorsal fins both large, the first over the pectoral-ventral interspace, the second slightly smaller than the first. Anal fin smaller than second dorsal, its origin and end slightly behind levels of those of second dorsal. Pectorals moderate sized, reaching below anterior part of first dorsal when adpressed, their

tips acutely rounded. Pectoral angle well before level of first dorsal. Ventrals smaller than dorsals and situated well behind level of first dorsal. Caudal fin with large terminal upper lobe and pointed lower subcaudal fin with large terminal upper lobe and pointed lower subcaudal lobe; its lower lobe originates slightly before level of origin of upper.

*Dimensions.* The detailed measurements in millimetres are as follows:

Length of head to first gill-slit, 179.  
 Length of head to fifth gill-slit, 220.  
 Tip of snout to anterior margin of eye, 71.  
 Breadth of snout immediately before eyes, 90.  
 Snout to origin of pectorals, 230.  
 Snout to origin of ventrals, 584.  
 Eye: horizontal diameter, 27.  
 Eye: vertical diameter, 11.5 (outside nictitating membrane).  
 Interorbital, 69.  
 Eye to spiracle, 13.  
 Length of nostril, 21.  
 Internarial, 32.  
 Preoral length, 65.  
 Width of mouth (distance between angles), 67.  
 Labial fold: upper, 26; lower, 15.  
 Height of first gill-opening, 27.  
 Height of last gill-opening, 19.  
 Length, snout to upper caudal root, 1,021.  
 Length of snout to vent (middle), 611.  
 Predorsal length, 380.  
 Depth at origin of first dorsal fin, 172.  
 Breadth below origin of first dorsal fin, 147.  
 Depth of caudal peduncle, 39; breadth, 30.  
 First dorsal fin: anterior margin, 129; base, 126; last ray, 52.  
 Interdorsal space, 312.  
 Second dorsal fin: anterior margin, 140; base, 114; last ray, 41.  
 Second dorsal fin to caudal base, 119.  
 Anal fin: anterior margin, 105; base, 90; last ray, 32.  
 Anal base to caudal base, 104.  
 Pectoral: length, 166; base, 60.  
 Origin of pectoral to that of ventral, 371.  
 Ventral fin: length of anterior margin, 80; base, 66; length of last ray, measured externally, 46.  
 Ventral origin to anal origin, 243.  
 Caudal: upper lobe, 228; lower lobe, 115.  
 End of upper caudal lobe, 80.  
 Upper edge of subcaudal notch, 49.

*Colour*, when fresh (frozen): Ashy grey above, with slight bronze tinge on back and sides, and shading to parchment white below. Eye grey, with the pupil dark grey-blue; iris surrounded by a smoky-grey ring. Inside of gill-slits milky white. Fins similar in colour to adjacent parts of body, without any light or dark marks at tips; axils of fins not much lighter than ground-colour. No conspicuous body-markings, such as spots or bars, but diffuse darker tones occur over eyes and gills, and here and there along flanks after thawing and preservation in formalin.

Described from the holotype, a female specimen, 1,250 mm. or 4 ft. 2 in. in total length; weight, 19 lb. Western Australian Museum, registered No. P2451.

*Locality.* Off Bunbury, Western Australia, hooked on long line in August, 1943, by Mr. Nicholas Soulos.

*Affinities.* The new species is distinguished from the only other one in the genus as follows:

A.	Ventral origin below posterior lobe of first dorsal fin. A marked gibbosity predorsally. No interdorsal ridge. Coloration transversely barred and with light spots	..	<i>F. macki</i>
AA.	Ventrals behind level of first dorsal fin. Predorsal profile not markedly gibbous. Interdorsal ridge present. Coloration uniform	.. .. .	<i>F. ventralis</i>

There are other minor differences in proportions, in size of anal fin, and outline of caudal.

In addition to the holotype from off Bunbury, other specimens have been examined or reported from various Western and South Australian localities, and it is evident that this species is the one which was regarded by Zietz, Waite and other Australian authors as the Japanese *Triakis scyllium*, which I (Fish. Austr. i, 1940, p. 115) removed from the Australian list. These extra (paratype) specimens have not all been preserved:

1. A mounted skin in the Western Australian Museum, from the Abrolhos Islands.
2. A male, 3 ft. 9 in. long, from off Second Valley, Rapid Bay, Fleurieu Peninsula, South Australia; January 2, 1942. Specimen not seen but a description and sketches by Mr. Keith Sheard, who obtained the shark, leave me no doubt as to the identification. He states that the species is common off the Fleurieu Peninsula in summer.
3. A cast of a South Australian example in the South Australian Museum at Adelaide.
4. The old skin recorded as "*Triakis scyllium*" by Zietz and Waite from South Australia, and housed in the South Australian Museum. Total length, 1,220 mm. Head, 220 mm. Interdorsal, 320 mm.
5. A head seen amongst shark offal at Bunbury, Western Australia, and caught by N. Soulos on long line, July 17, 1943.
6. A butchered carcass of a female from Fremantle in Perth market, August 26, 1943.

*Range.* The new species ranges from Fleurieu Peninsula, South Australia, to the Abrolhos Islands (Pelsart Island, December, 1913), Western Australia, and is of sufficient abundance to be of commercial value as food for man.

*Vernacular Name.* This species was at first called by the Bunbury fishermen the "Gummy with teeth", to distinguish it from the ordinary Gummy shark with blunt crowns (*Emissola*), from which it can also be separated by the nasal cirrhi. I therefore suggested Whiskery Shark as a vernacular name, and this has been adopted by the Fisheries Department, Perth, and the fishermen themselves.